

IN THE CLAIMS:

1.-21. (Cancelled)

22. (Currently amended) Device for refractive laser surgery on a target object (14) having a first laser beam source (3) with a ~~first~~fs-pulse optical output (7) for ~~femtosecond-pulse (fs-pulse)~~fs-pulse laser beams, a second laser beam source (4) with a ~~second~~fs-pulse optical output (9) for UV laser beams, and a shared scanner device (13) for scanning the target object (14) using ~~fs-pulse~~fs-pulse laser beams emitted from the optical output (7) and UV laser beams emitted from the second optical output (9);

wherein there is at least partial overlap between a first optical path followed by the fs-pulse laser beam from the optical output (7) to the shared scanner device (13), and a second optical path followed by the UV laser beam from the other optical output (9) to the shared scanner device (13), so that a shared part of the first and second optical paths (11) is formed; and wherein the shared scanner device (13) comprises an optical guidance mechanism for guidance both of the fs-pulse laser beam and of the UV laser beam.

23. (Cancelled)

24. (Currently amended) Device as per claim ~~22~~23, characterized by an optical component (10) for locking in the ~~fs-pulse~~fs-pulse laser beam from the ~~first~~fs-pulse optical output (7) and/or the UV laser beam from the ~~second~~fs-pulse optical output (9) into the shared part of the ~~first and second optical path~~fs-pulse (11).

25. (Currently amended) Device as per claim ~~22~~23, characterized by an arrangement of safety mechanisms (22) in the region of the shared part of the ~~first and second optical path~~fs-pulse (11), so that manipulation of the ~~fs-pulse~~fs-pulse laser beam and of the UV laser beam can be achieved with the aid of the safety mechanisms (22).

26. (Cancelled)

27. (Currently amended) Device as per claim 22, wherein the first laser beam source (3) and the second laser beam source (4) are integrated into a laser beam device (1) with ~~an~~the optical output (30), such that the fs- ~~pulse~~impulse laser beam and the UV laser beam are emitted through the optical output (30) of the laser beam device (1).

28. (Previously presented) Device as per claim 22, characterized by a shared pumping source preferentially using diode pumps for the optical pumping of the first laser beam source (3) and the second laser beam source (4).

29. (Cancelled)

30. (Cancelled)

31. (Previously presented) Device as per claim 22, wherein the second laser beam source (4) is an excimer laser.

32. (Currently amended) Device as per claim 22, comprising a tracking device (16) for the tracking of a movement of the target object (14), and by the fact that the tracking device (16) is connected with the shared scanner device (13).

33. (Currently amended) Device as per claim 22, wherein the first laser beam source (3) is a fiber laser amplification system with ~~pulse~~impulse energies in the range of approximately a few μ J and subsequent ~~pulse~~impulse frequencies in a range of up to 1 MHz.

34. (Currently amended) Application of a device as per claim 22 for the performing of a LASIK-procedure, a PRK procedure, a LASEK procedure or intrastomal procedures, on an eye. ("LASIK"; Laser-in-situ-Keratomileusis).

35. (Currently amended) Procedure for refractive laser surgery on a target object (14), such that a femtosecond-pulse (fs-pulse)~~an fs-impulse~~ laser beam is produced using a first laser beam source (3) and a UV laser beam is produced using a second laser beam source (4), and such that the fs- ~~pulse~~impulse laser beam and the UV laser beam are directed across a shared scanner device (13) for scanning onto the target object;

wherein the fs-pulse laser beam travels along one optical path from one optical output (7) to the shared scanner device (13), by the fact that the UV laser beam travels along a second optical path from a second optical output (9) to the shared scanner device(13), and by the fact that in doing so, the fs-pulse laser beam and the UV laser beam travel at least partially along a shared part of the first and second optical paths (11) due to an overlap between the first optical path and the second optical path; and wherein the fs-pulse laser beam and the UV laser beam are guided with the aid of an optical guidance mechanism of the scanner device (13).

36. (Cancelled)

37. (Currently amended) Procedure as per claim 35, wherein the fs-~~pulse~~~~impulse~~ laser beam emitted from the first optical output (7) and/or the UV laser beam emitted from the second optical output (9) are locked into ~~at~~ the shared part of the ~~first and second optical paths~~path (114) with the aid of ~~an~~the optical component (10).

38. (Cancelled)

39. (Currently amended) Procedure as per claim 35, wherein the first laser beam source (3) and the second laser beam source (4) are integrated into a laser beam device (1) with ~~a single~~~~one~~ optical output, such that the fs- ~~pulse~~~~impulse~~ laser beam and the UV laser beam are emitted from the single optical output of the laser beam device (1).

40. (Previously presented) Procedure as per claim 35, wherein the first laser beam source (3) and the second laser beam source (4) are optically pumped with a shared pumped light source (18).

41. (Currently amended) Procedure as per claim 35, wherein a slice of the cornea of the eye is cut by means of the fs-~~pulse~~~~impulse~~ laser beam and an eyesight correction operation is performed by means of the UV laser beam.

42. (Currently amended) Procedure as per claim 35, wherein the scanning of the target object (14) is performed with the aid of the tracking device (16) connected to

the shared scanner device (13 for the purpose of tracking a movement of the target object (14).

43. (New) Device for refractive laser surgery on a target object (14) having a first laser beam source (3) with a first optical output (7) for femtosecond-pulse (fs-pulse) laser beams, a second laser beam source (4) with a second optical output (9) for UV laser beams, and a shared scanner device (13) for scanning the target object (14) using fs-pulse laser beams emitted from the optical output (7) and UV laser beams emitted from the second optical output (9);

said device being characterized by a cascaded sum frequency mixer (6) for the generation of the UV laser beam, wherein the cascaded sum frequency mixer (6) is a frequency quadrupler, for instance of the type $(\omega + \omega \rightarrow 2\omega; 2\omega + 2\omega \rightarrow 4\omega)$ or $(\omega + \omega \rightarrow 2\omega; 2\omega + \omega \rightarrow 3\omega; 3\omega + \omega \rightarrow 4\omega)$.